



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-1320; Directorate Identifier 2011-NM-208-AD; Amendment 39-17066; AD 2012-11-03]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 777 airplanes. This AD was prompted by four reports of retaining cross bolt hardware not fully engaged into the fuse pins of the forward trunnion lower housing of the main landing gear (MLG), which could result in an incorrect MLG emergency landing break-away sequence. This AD requires a detailed inspection of the fuse pin cross bolts and fuse pins of the left and right MLG forward trunnion lower housing to verify that the cross bolts are correctly installed and that there are no missing fuse pins, and replacement of the fuse pins if necessary. We are issuing this AD to prevent an incorrect emergency landing MLG break-away sequence, which could result in puncturing of the wing box and consequent fuel leaks and an airplane fire. Failure of the fuse pins could also result in a possible landing gear collapse causing a runway excursion during take-off or landing.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet: <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** James Sutherland, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6533; fax: 425-917-6590; e-mail: [James.Sutherland@faa.gov](mailto:James.Sutherland@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on December 15, 2011 (76 FR 77937). That NPRM proposed to require a detailed inspection of the fuse pin cross bolts and fuse pins of the forward trunnion

lower housing of the left and right MLG to verify that the cross bolts are correctly installed and that there are no missing fuse pins, and replacing all fuse pins in the MLG forward trunnion upper and lower housing with new fuse pins if necessary.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (76 FR 77937, December 15, 2011) and the FAA's response to each comment.

### **Support for the NPRM (76 FR 77937, December 15, 2011)**

United Airlines stated it concurs with the proposed rule (76 FR 77937, December 15, 2011) to inspect for the correct installation of the cross bolts and the fuse pins to ensure a high level of safety for the 777 fleet.

Thomas Hayden Barnes stated that he supports efforts to ensure airline safety and the proposed rule (76 FR 77937, December 15, 2011).

### **Request to Clarify Fuse Pin Replacement**

American Airlines (American) and FedEx requested clarification as to whether the NPRM (76 FR 77937, December 15, 2011) requires changing all fuse pins on both left and right MLG even if the discrepant condition is only found on one side of the airplane MLG.

We agree to clarify the fuse pin replacement by changing paragraph (g) of the final rule to read, in part: "If any cross bolt of the MLG forward trunnion lower housing is not installed correctly, or if any fuse pin of the MLG forward trunnion lower housing is missing: Before further flight, replace all fuse pins in the MLG forward trunnion upper and lower housing on the side, or sides of the airplane, where the missing or incorrectly installed fuse pin/pins were discovered . . . ."

### **Request to Use Maintenance Pits and Clarify Procedure**

American requested that the NPRM (76 FR 77937, December 15, 2011) permit the use of maintenance pits in lieu of jacking the airplane, as specified in Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011. American stated that it is acceptable to stabilize the airplane on jacks and lower maintenance pits until the wheels do not touch the surface, and accomplishes the same effect of unloading the airplane weight from the trunnion for the purposes of changing the fuse pins.

American also noted that the phrase “until the wheels are just off the ground” in Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011, might be construed to be a dimension without tolerance.

We agree that the use of lowered maintenance pits to unload the MLG does have the same effect as lifting. We also agree that the meaning of the phrase “just off the ground” is a dimension without tolerance. We have changed paragraph (g) of the final rule to specify that step 1 in Part 2 of paragraph 3.B. of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011, is not considered regulatory for the purposes of this AD.

### **Request to Change Applicability**

Boeing and FedEx requested that the applicability of the NPRM (76 FR 77937, December 15, 2011) list only the airplanes specified in Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011. Boeing stated that airplanes not listed in this service information have been inspected during production to ensure they do not have the unsafe condition. FedEx stated that it currently flies 6 aircraft that are not listed in the NPRM, and is adding new aircraft to its fleet, none of which will be listed in the NPRM.

We agree. The intent of the AD is to ensure that inspections are done on airplanes on which Boeing was unable to confirm that the cross bolts are installed correctly and on which there are no missing fuse pins. We have changed paragraph (c) of the final rule to apply to the airplanes identified in Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011.

#### **Additional Change Made to this Final Rule**

We have removed Note 1 that followed paragraph (g) in the NPRM (76 FR 77937, December 15, 2011) from the final rule. That information is contained in Note 7 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011, and does not need to be included in the AD.

#### **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (76 FR 77937, December 15, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 77937, December 15, 2011).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

#### **Costs of Compliance**

We estimate that this AD affects 166 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Detailed Inspection	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$42,330

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements.

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replace fuse pins	44 work-hours X \$85 per hour = \$3,740	Between \$15,216 and \$52,620	Between \$18,956 and \$56,360

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2012-11-03 The Boeing Company:** Amendment 39-17066; Docket No. FAA-2011-1320; Directorate Identifier 2011-NM-208-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by four reports of retaining cross bolt hardware not fully engaged into the fuse pins of the forward trunnion lower housing of the main landing gear (MLG), which could result in an incorrect MLG emergency landing break-away sequence. We are issuing this AD to prevent an incorrect emergency landing MLG break-away sequence, which could result in puncturing of the wing box and consequent fuel leaks and an airplane fire. Failure of the fuse pins could also result in a possible landing gear collapse causing a runway excursion during take-off or landing.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.



**(g) Detailed Inspection and Replacement**

Within 1,125 days after the effective date of this AD, perform a detailed inspection of the fuse pin cross bolts and fuse pins of the left and right MLG forward trunnion lower housing to verify that the cross bolts are installed correctly and that there are no missing fuse pins, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011. If any cross bolt of the MLG forward trunnion lower housing is not installed correctly, or if any fuse pin of the MLG forward trunnion lower housing is missing: Before further flight, replace all fuse pins in the MLG forward trunnion upper and lower housing on the side, or sides, of the airplane where the missing or incorrectly installed fuse pin/pins were discovered, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011, except step 1 in Part 2 of paragraph 3.B of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011, is not considered regulatory for the purposes of this AD.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(i) Related Information**

For more information about this AD, contact James Sutherland, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6533; fax: 425-917-6590; e-mail: [James.Sutherland@faa.gov](mailto:James.Sutherland@faa.gov).

**(j) Material Incorporated by Reference**

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following service information under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Boeing Alert Service Bulletin 777-57A0090, dated August 24, 2011.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; phone: 206-544-5000, extension 1; fax: 206-766-5680; e-mail: [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet: <https://www.myboeingfleet.com>.

(3) You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 18, 2012.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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